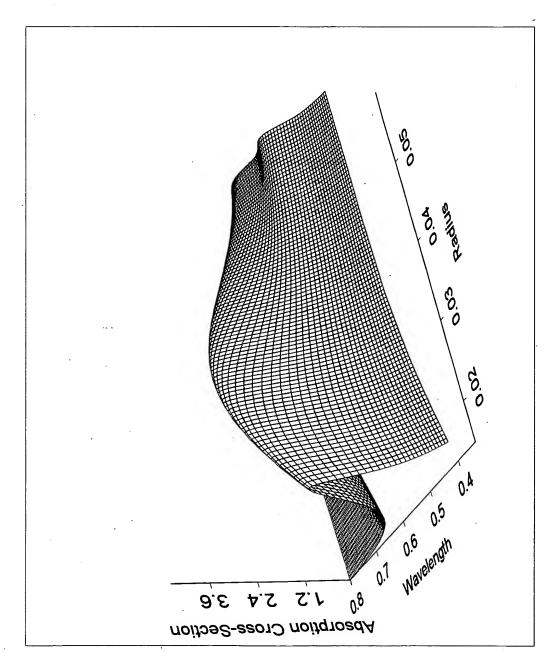


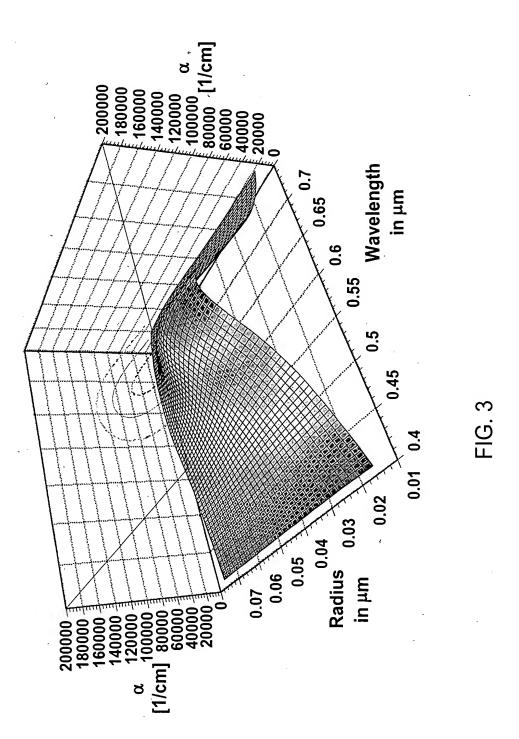
FIG. 1

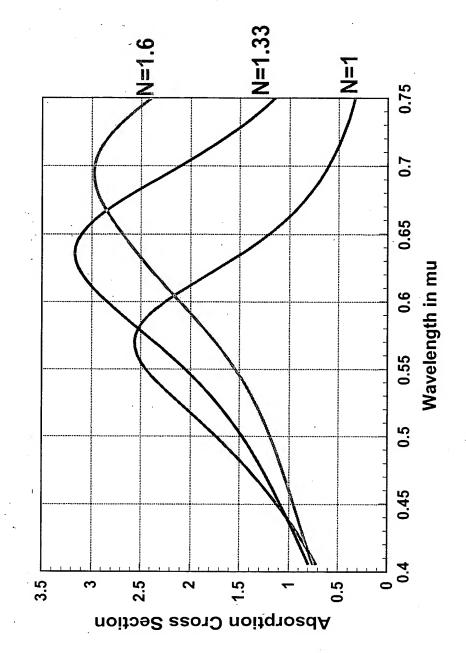


Docket No.: 3483.1000-001

Title: "Encapsulated Nanoparticles for the..."

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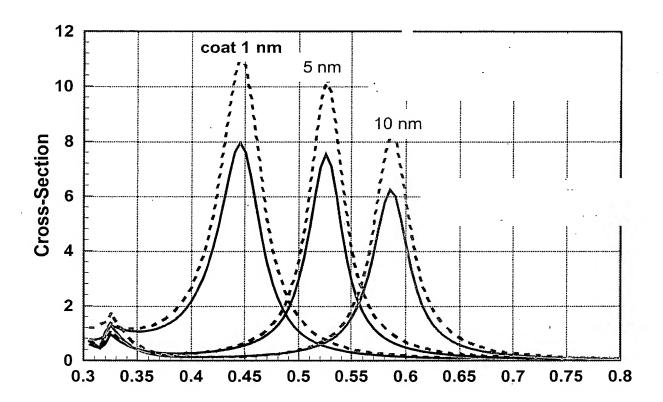
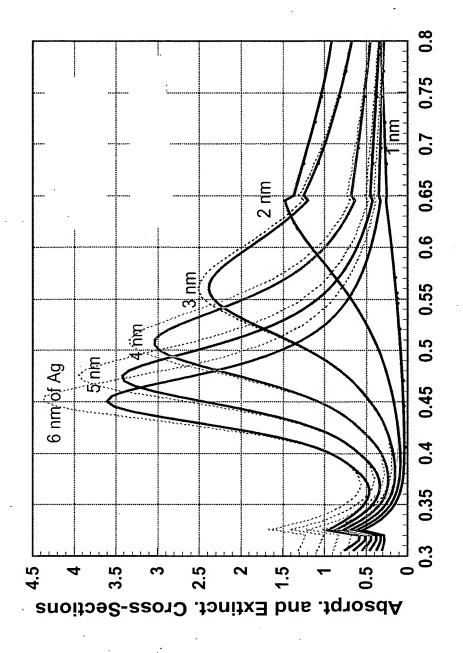
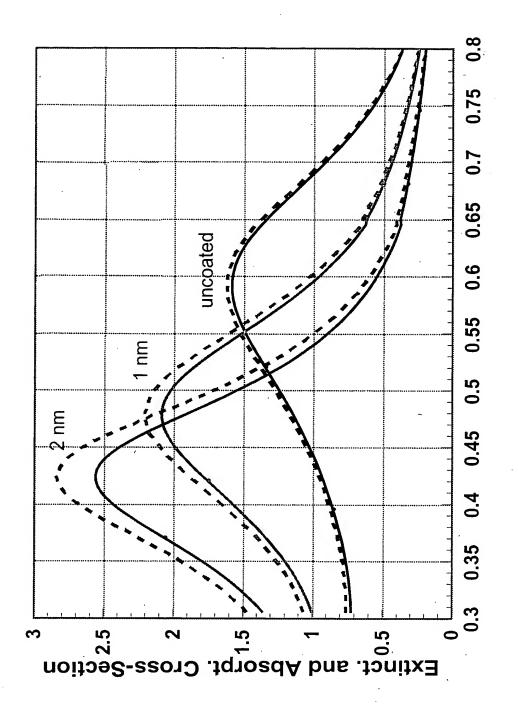
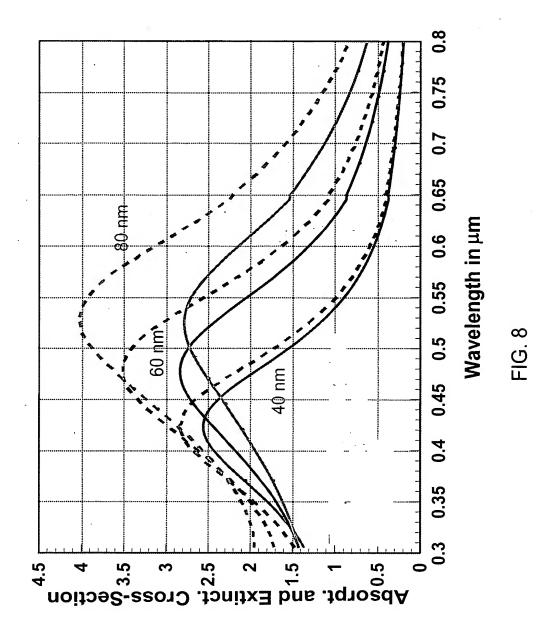


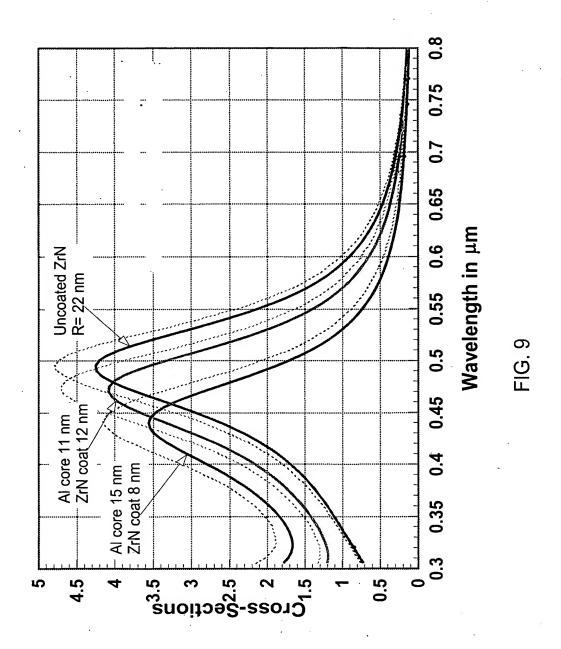
FIG. 5



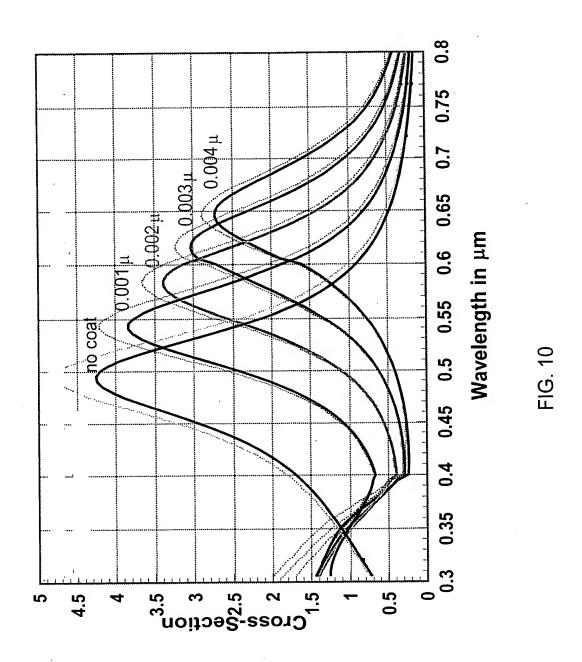


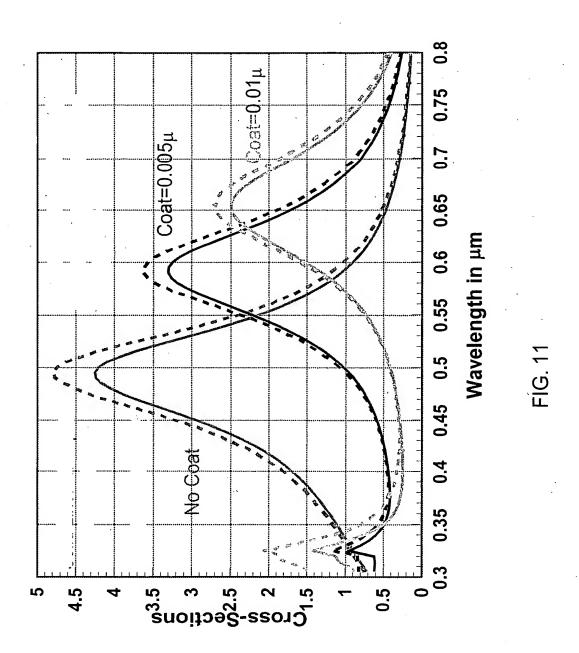
3483.1000-001 Docket No.:

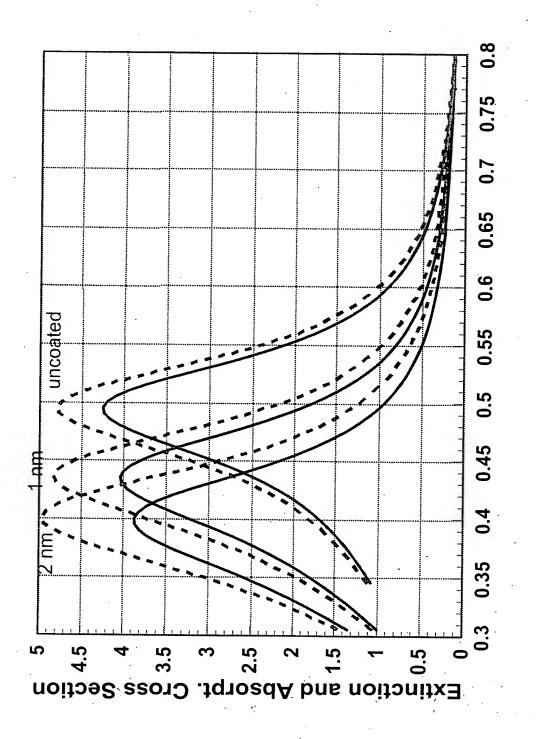


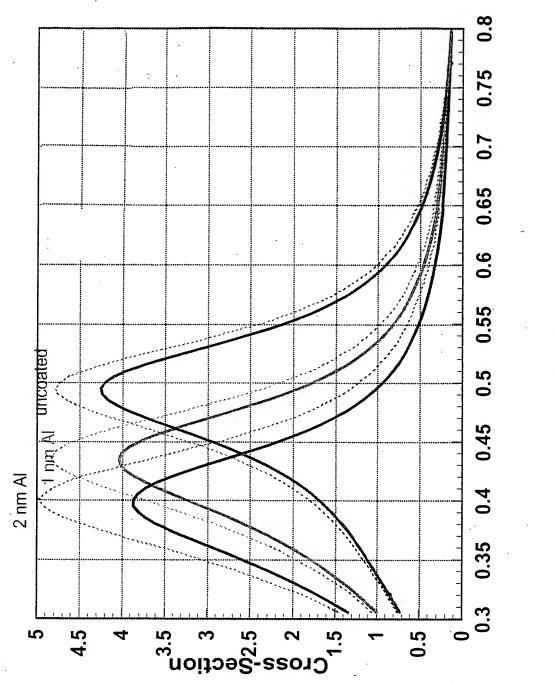


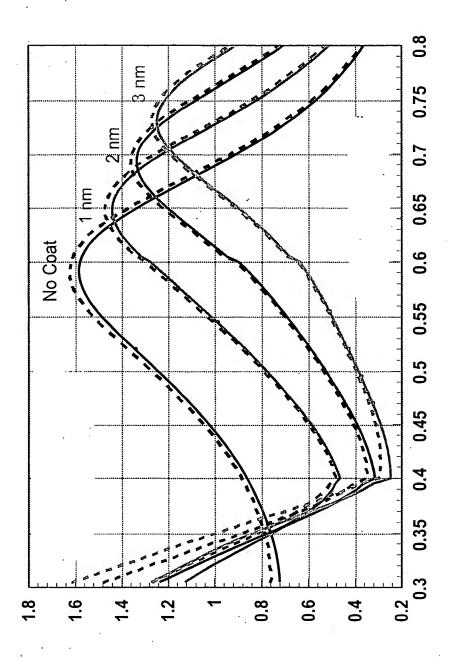
3483.1000-001 Docket No.:

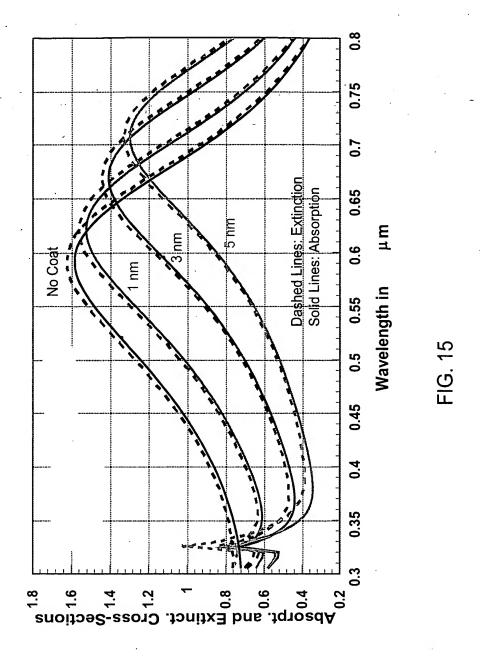












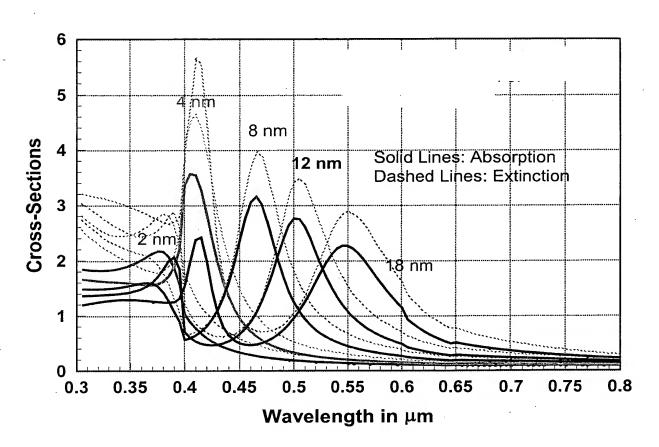


FIG. 16

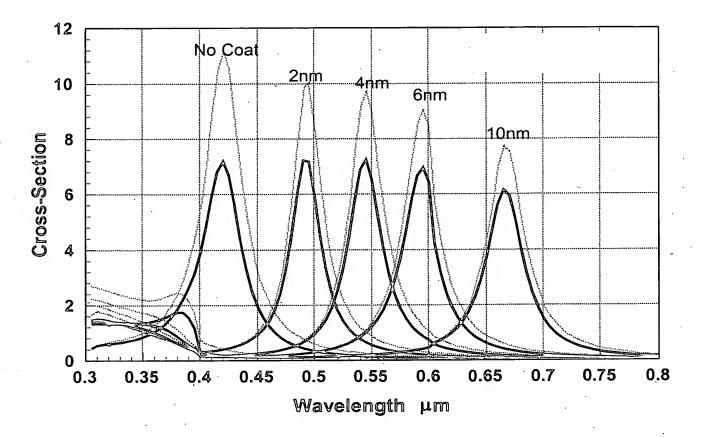


FIG. 17

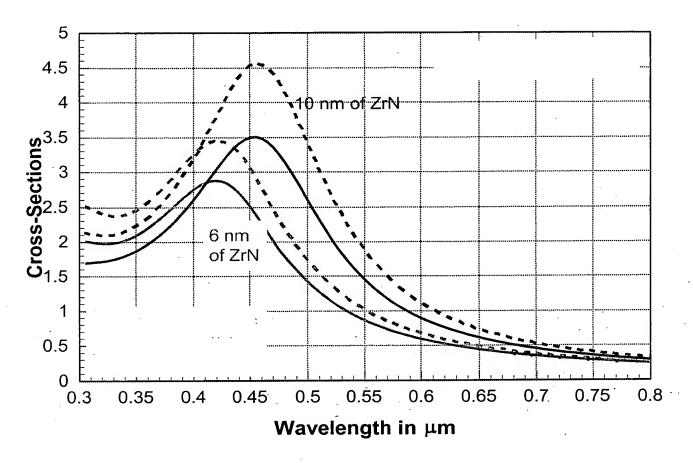


FIG. 18

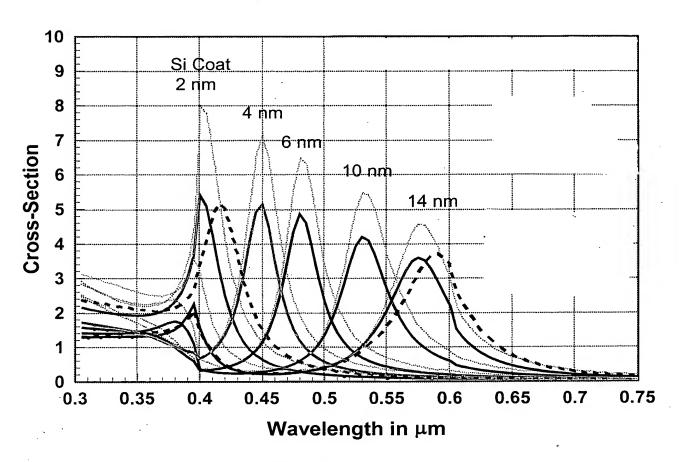


FIG. 19

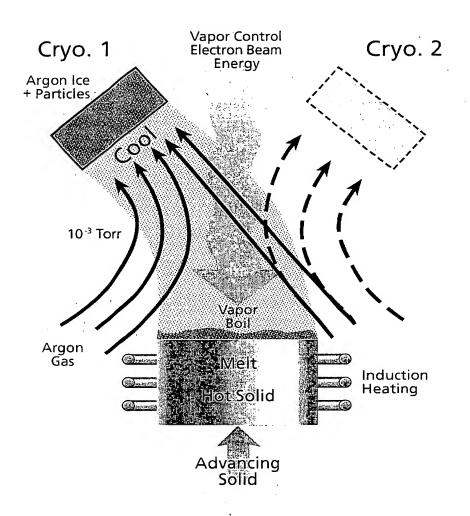


FIG. 20

Title: "Encapsulated Nanoparticles for the..."

Inventors: Manfred R. Kuehnle, et al.

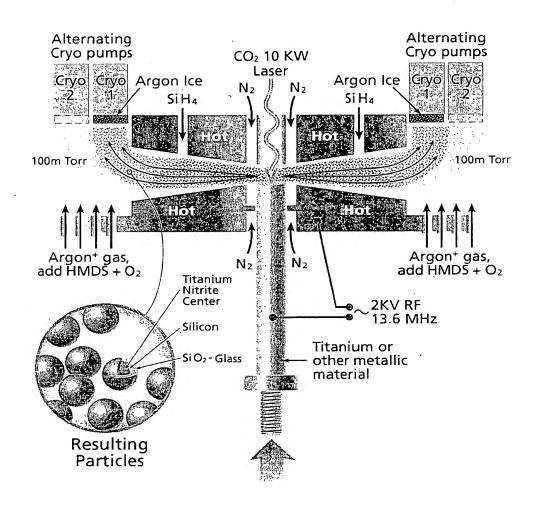


FIG. 21

Title: "Encapsulated Nanoparticles for the..."

Inventors: Manfred R. Kuehnle, et al.

## **PARTICLE FORMATION SCHEMATIC**

## **High Heat**

Metal Vapor 3

**Metal Nitrite** 

Heat + Ion plasma

Heat further reduced

Heat reduced more to Allow Condensation Gas plasma Nitrogen N₂

Argon gas envelope, (inert) produces laminar flow

Capsule gas condensate to form shell

Capsule grows to control diameter

5x dia. hot Silane gas(Si H<sub>4</sub>); or polymer bead. Spatial pearl grows. Si O<sub>2</sub> bead approx.  $0.1\mu m$  dia. H<sub>4</sub> goes to ice block.

HMDS steric hindrance coating or linseed oil.

## **Low Heat**

**Particles stored in ice block** 

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FIG. 22